

REMARKS

Upon entry of the present amendment claims 1-14 are pending in the application. Claims 1-14 have been amended in accordance with the requirements of U.S. patent practice. Applicants respectfully request entry of the preliminary amendment.

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**MARKED UP COPY OF THE AMENDMENTS**

**IN THE SPECIFICATION**

After the title, please insert --This application is a National Phase Application of Patent Application **PCT/EP00/03267** filed on 12 April 2000--

**IN THE CLAIMS:**

Please substitute claims 1-14 as follows.

1. (Amended) A highly scratch-resistant multicoat clearcoat system A for a primed or unprimed substrate, [producible]produced by
  - (1) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation to the surface of the substrate, and partially curing it, [and]
  - (2) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and [also, if desired,]optionally thermally, [comprising nanoparticles, ]to the surface of the clearcoat film[(s)] I, and [then]
  - (3) curing the clearcoat films I and II conjointly with actinic radiation and thermally.
2. (Amended) A highly scratch-resistant multicoat clearcoat system A for a primed or unprimed substrate, [producible]produced by
  - (1) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation to the surface of the substrate, curing it and roughening it,



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- (2) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation wet-on-wet to the surface of the basecoat film III,
- (3) curing the basecoat film III and clearcoat film(s) I conjointly, thermally and with actinic radiation,
- (4) roughening the outer surface of the clearcoat film(s) I,
- (5) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and[ also], [if desired]optionally[.] thermally, [comprising nanoparticles,] to the outer surface of the clearcoat film[(s)] I, and [then]
- (6) curing the clearcoat film II with actinic radiation and, [if desired]optionally, thermally.

5. (Amended) A process for producing a highly scratch-resistant multicoat clearcoat system (A) on a primed or unprimed substrate, [which comprises]comprising

- (1) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation to the surface of [the]a substrate, and partially curing it, and
- (2) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and[ also], [if desired,]optionally thermally, [comprising nanoparticles, ]to the surface of the clearcoat film[(s)] I, and then
- (3) curing the clearcoat films I and II conjointly with actinic radiation and thermally.

6. (Amended) A process for producing a highly scratch-resistant multicoat clearcoat system A on a primed or unprimed substrate, [which comprises]comprising

- (1) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation to the surface of [the] substrate, curing it and roughening it,
- (2) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and[ also], [if desired,] optionally thermally, [comprising nanoparticles,] to the outer surface of the clearcoat film(s) I, and [then]
- (3) curing the clearcoat film II with actinic radiation and, [if desired,] optionally thermally.

7. (Amended) A process for producing a highly scratch-resistant multicoat color and/or effect coating system B on a primed or unprimed substrate, [which comprises] comprising

- (1) applying at least one color and/or effect basecoat film III of a pigmented coating material III curable thermally and[ also], [if desired] optionally, with actinic radiation to the surface of the substrate and drying it without curing,
- (2) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation wet-on-wet to the surface of the basecoat film III, and partially curing them, [and]
- (3) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and[ also], [if desired] optionally, thermally, [comprising nanoparticles, ] to the surface of the clearcoat film[(s)] I, and [then]
- (4) curing the basecoat film(s) III and the clearcoat films I and II conjointly with actinic radiation and thermally.

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8. (Amended) A process for producing a highly scratch-resistant multicoat color and/or effect coating system B on a primed or unprimed substrate, [which comprises]comprising
- (1) applying at least one color and/or effect basecoat film III of a pigmented coating material III curable thermally and[ also], [if desired]optionally, with actinic radiation to the surface of the substrate and drying it without curing,
  - (2) applying at least one clearcoat film I of a coating material I curable thermally and with actinic radiation wet-on-wet to the surface of the basecoat film III,
  - (3) curing the basecoat film III and clearcoat film[(s)] I conjointly, thermally and with actinic radiation,
  - (4) roughening the outer surface of the clearcoat film[(s)] I,
  - (5) applying a further clearcoat film II of a coating material II comprising nanoparticles and curable with actinic radiation and[ also], [if desired]optionally, thermally, [comprising nanoparticles, ]to the outer surface of the clearcoat film[(s)] I, and [then]
  - (6) curing the clearcoat film II with actinic radiation and, [if desired]optionally, thermally.
9. (Amended) The clearcoat system A [as claimed in]of claim 1[ or 2],[ the multicoat system B as claimed in claim 3 or 4, the process for producing the clearcoat system A as claimed in claim 5 or 6, or the process for producing the multicoat system B as claimed in claim 7 or 8,] wherein the coating material II comprises nanoparticles based on silicon dioxide, aluminum oxide and zirconium oxide.
10. (Amended) The clearcoat system A [as claimed in any ]of claim[s] 1[, 2 and 9, the multicoat system B as claimed in any of claims 3, 4 and 9, the process

for producing the clearcoat system A as claimed in any of claims 5, 6 and 9, or the process for producing the multicoat system B as claimed in any of claims 7 to 9,] wherein the coating material I comprises

- (a1) at least one constituent [containing]comprising
  - (a11) at least two functional groups which serve for crosslinking with actinic radiation, and [if desired] optionally
  - (a12) at least one functional group which is able to undergo thermal crosslinking reactions with a complementary functional group (a22) in the constituent (a2), and
- (a2) at least one constituent [containing]comprising
  - (a21) at least two functional groups which serve for crosslinking with actinic radiation, and
  - (a22) at least one functional group which is able to undergo thermal crosslinking reactions with a complementary functional group (a12) in the constituent (a1), and [also, if desired]optionally,

one or more members selected from the group consisting of

- (a3) at least one photoinitiator,
- (a4) at least one thermal crosslinking initiator,
- (a5) at least one reactive diluent curable thermally and/or with actinic radiation,
- (a6) at least one coatings additive, [and/or]
- (a7) at least one thermally curable constituent,

and mixtures thereof, with the proviso that the coating material I comprises at least one thermally curable constituent (a7) if the constituent (a1) contains no functional group (a12).

11. (Amended) The clearcoat system A[, the multicoat system B, the process for producing the clearcoat system A or the process for producing a multicoat system B as claimed in]of claim 10, wherein the functional groups (a11) and

(a21) comprise olefinically unsaturated groups or epoxide groups, [especially olefinically unsaturated groups, hydroxyl groups in the case of the functional groups (a12) and [lacuna] in the case of the complementary functional groups (a22) and isocyanate groups].

12. (Amended) The clearcoat system A[, the multicoat system B, the process for producing the clearcoat system A or the process for producing a multicoat system B as claimed in]of claim 10[ or 11], wherein the constituent (a1) comprises a urethane (meth)-acrylate and the constituent (a2) comprises a member selected from the group consisting of(meth)acrylate-functional (meth)acrylate copolymer containing free isocyanate groups, [and/or comprises a ](meth)acrylate-functional polyisocyanate, and mixtures thereof.
13. (Amended) The [use of the clearcoat system A as claimed in any of claims 1, 2 and 9 to 12, of the multicoat systems B as claimed in any of claims 3, 4 and 9 to 12, of the ]process [for producing the clearcoat system A as claimed in any ]of claim[s] 5, [6 and 9 to 12, or of the process for producing the multicoat system B as claimed in any of claims 7 to 12, in]wherein the substrate is selected from the group consisting of automotive OEM [finishing]substrates, automotive refinish substrates, [the coating of ]plastics substrates, furniture [coating]substrates, [and industrial coating, including] coil [coating]substrates and container [coating]substrates.
14. (Amended) An article selected from the group consisting of motor vehicles, plastic parts, furniture items, [or other part for private or ]industrial [use]parts, [including a ]coil, [or ]and containers, [comprising at least one clearcoat system A as claimed in any of claims 1, 2 and 9 to 12, at least one multicoat system B as claimed in any of claims 3, 4 and 9 to 12, at least one clearcoat system A ]produced [with the aid of]by the process [as claimed in any ]of claim[s] 5[, 6 and 9 to 12, and/or at least



one multicoat system B produced with the aid of the process as claimed in any of claims 7 to 12].

Respectfully Submitted,

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